

ABSTRACT OF THE DISCLOSURE

5 A decision feed back equalizer is proposed, in which two feed
back routines are provided for one symbol-preceding decided data.
The signal space is separated into decidable areas and
uncertainty areas in the present invention. Each of decidable
10 areas is an area where a distance between any point in the
decidable area and the signal point is small. Each uncertainty
areas is an area where a distance between any point in the
uncertainty area and the signal point is large. In a case where
the one symbol-preceding equalized signal exists in a decidable
15 area, since the one symbol-preceding decided data is presumed to
be correct, the decided data is fed back. On the other hand, in a
case where the one symbol-preceding equalized signal exists in an
uncertainty area, since the one symbol-preceding decided data are
presumed to be error, the decided data are not fed back, while the
one symbol-preceding decided data is so selected from all the
20 predicted symbol-preceding decided data that the instant
equalized data exists in the decidable area. The decided data
selected is fed back.